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| **COVERING BOTH GLE’S AND CCSS**  **(State correlation is not a perfect match-What makes them the same….what makes them different?)**  1.1.1 Analyze a variety of patterns (physical phenomena, numeric and geometric patterns, arithmetic sequence) and generalize with algebraic expressions, formulas or equations.  **CC.7.EE.4a** Solve word problems leading to equations of the form *px* + *q* = *r* and *p*(*x* + *q*) = *r*, where *p*, *q*, and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?  1.2.4 Write expressions, formulas, equations or inequalities using variables to represent mathematical relationships and solve problems.  **CC.7.RP.2c** Represent proportional relationships by equations. For example, if total cost *t* is proportional to the number *n* of items purchased at a constant price *p*, the relationship between the total cost and the number of items can be expressed as *t* = *pn*.  **CC.7.EE.2** Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, *a* + 0.05*a* = 1.05*a* means that “increase by 5%” is the same as “multiply by 1.05.”  **CC.7.EE.4a** Solve word problems leading to equations of the form *px* + *q* = *r* and *p*(*x* + *q*) = *r*, where *p*, *q*, and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?  1.1.3 Determine when mathematical situations are continuous (distance traveled over time) or discrete sets of points, e.g., weekly sales.  1.2.6 Examine situations with constant or varying rates of change and know that a constant rate of change describes a linear relationship.  **CC.7.RP.2a** Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.  1.3.7 Evaluate and simplify algebraic expressions, equations and formulas using algebraic properties (i.e. commutative, associative, distributive, inverse operations, and the additive and multiplicative identities) and the order of operations.  **CC.7.EE.1** Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.  1.3.8 Solve real world problems using a variety of algebraic methods including tables, graphs, equations and inequalities.  **CC.7.EE.3** Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations as strategies to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.  **CC.7.EE.4b** Solve word problems leading to inequalities of the form *px* + *q* > *r* or *px* + *q* < *r*, where *p*, *q*, and *r* are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example, As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions. |
| **COVERING BOTH GLE’S AND CCSS AND SCIENCE INTEGRATION** |
| **GLE’s but not CCSS**  1.2.4 Write expressions, formulas, equations or inequalities using variables to represent mathematical relationships and solve problems.  **CC.6.EE.6** Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.  **CC.6.EE.7** Solve real-world and mathematical problems by writing and solving equations of the form *x* + *p* = *q* and *px* = *q* for cases in which *p*, *q* and *x* are all nonnegative rational numbers.  1.1.2 Identify and describe in writing the independent and dependent variables in a mathematical situation, e.g. age vs. height of children.  **CC.6.EE.9** Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.  1.2.5 Represent and compare the characteristics of linear and nonlinear relationships using verbal descriptions, e.g., linear –“increases $1 per month” vs. nonlinear – “doubles every month,” tables, graphs, equations or inequalities (when possible).  **CC.6.EE.9** Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.  1.3.7 Evaluate and simplify algebraic expressions, equations and formulas using algebraic properties (i.e. commutative, associative, distributive, inverse operations, and the additive and multiplicative identities) and the order of operations.  **CC.6.EE.2c** Evaluate expressions by substituting values for their variables. Include expressions that arise from formulas in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas V = s^3 and A = 6 s^2 to find the volume and surface area of a cube with sides of length s = 1/2.  **CC.6.EE.3** Apply the properties of operations as strategies to generate equivalent expressions. For example, apply the distributive property to the expression 3(2 + x) to produce the equivalent expression 6 + 3x; apply properties of operations to y + y + y to produce the equivalent expression 3y.  **CC.6.EE.4** Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.  1.3.8 Solve real world problems using a variety of algebraic methods including tables, graphs, equations and inequalities.  **CC.6.EE.6** Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.  **CC.6.EE.7** Solve real-world and mathematical problems by writing and solving equations of the form *x* + *p* = *q* and *px* = *q* for cases in which *p*, *q* and *x* are all nonnegative rational numbers.  **CC.6.EE.8** Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x > c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams.  1.1.3 Determine when mathematical situations are continuous (distance traveled over time) or discrete sets of points, e.g., weekly sales.  4.2.3 Make and defend in writing predictions based on patterns and trends from the graphical representations. |
| **CCSS but not GLE’s** |